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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/603,859

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Oren Kaidar

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EXAMINER

SOL, ANTHONY M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/603,859	Applicant(s) KAIDAR ET AL.	
	Examiner Anthony Sol	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/10/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's Amendment filed 9/10/2008 is acknowledged.
- Claims 1, 8, 17, 20, and 23 have been amended.
- Claims 1-25 remain pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 6-11, and 15-24 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,580,700 B1 ("Pinard").

Regarding claims 1, 7-10, 16, 17, 19-21, and 23,

Pinard discloses scanning a first channel from a set of channels, wherein the first channel is associated with a first access point (col. 2, lines 49-59, *scanning for the most eligible access point*), the scanning comprising iteratively (col. 6, lines 4-7, *In order to minimize fluctuation the RSSI value for each access point in the table is averaged over a predetermined number of responses*; col. 6, lines 36-37, *The mobile units are programmed to carry out an update probe at predetermined intervals*), receiving a packet on the first channel, determining if the received packet is an informational

Art Unit: 2419

packet, ending the scanning of the first channel and joining the first access point if the received packet is an informational packet (col. 5, lines 14-31, *In FIG. 3, the mobile unit (MU) (first noted at step 6) sends out a probe packet to all access points (APs), typically at the lowest data rate it is otherwise able to use with the network. The probe packet contains the mobile unit source address but has no destination address and hence any access point that detects the probe packet and is capable of responding at the same data rate must send a response. Accordingly, the probe packet is detected by all access points within range (step 7) and a subset of those access points sends out a probe response packet (step 8.) An evaluation of the signal quality and possibly other factors is made (as will be subsequently described) by the MU of the communications with the most eligible access point (if any) at the highest data rate. If such communications are acceptable, **the MU will associate with the selected AP (step 9):***

Note that the limitation of an informational packet is broad and is mapped to Pinard's probe response packet with an acceptable signal quality), determining information regarding the first channel from the received packet if the received packet is not an informational packet, and updating at least one statistic describing the first channel based on the information (col. 5, line 62-col. 6, line 19, *As each probe packet response (PPR) is received 16 the signal quality of the response is measured by determining the received signal strength indication (RSSI) 17; (col. 6, lines 4-7, *In order to minimize fluctuation the RSSI value for each access point in the table is averaged over a predetermined number of responses*), and after the at least one statistic is updated for a plurality of packets, stopping scanning of the first channel and scanning a second*

Art Unit: 2419

channel from the set of channels if the at least one statistic indicates the first channel is not desirable, wherein the second channel is associated with a second access point (col. 6, lines 36-65, *each mobile unit carries out a full scan, probing all seventy nine channels, upon power up and every thirty seconds. The probe response packet transmitted by an access point contains all necessary synchronization information for a mobile unit to latch on to the current channel of the access point and follow the hopping pattern at any stage...It should be noted that a mobile unit experiencing poor communication will re-associate only if an eligible access point is identified).*

Regarding claims 2, 11, 18, 22, and 24,

Pinard discloses that an evaluation of the signal quality and possibly other factors is made by the MU of the communications with the most eligible access point (if any) at the highest data rate. If such communications are acceptable, the MU will associate with the selected AP (col. 5, lines 14-31).

Regarding claims 6 and 15,

Pinard discloses that an evaluation of the signal quality and possibly other factors is made (as will be subsequently described) by the MU of the communications with the most eligible access point (if any) at the highest data rate. If such communications are acceptable, **the MU will associate with the selected AP** (step 9)(col. 5, lines 14-31)

Pinard further discloses that as each probe packet response (PPR) is received the signal quality of the response is measured by determining the received signal strength indication (RSSI)(col. 5, line 62 - col. 6, line 19).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 12, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinard in view of U.S. Patent No. 6,898,198 B1 ("Ryan").

Regarding claims 3, 12, and 25,

Pinard does not disclose determining if the number of retries is above a threshold.

Ryan discloses that as the PER increases, the retry rate increases, and moreover some packets have to be resent more than once, i.e., some of the retries have to be retried, so the effective throughput seen by the user drops. The AP dynamically **determines the point at which it is better to reduce the data rate**, which also reduces PER such that the throughput is improved (col. 10, lines 50-55).

It would have been *prima facie* obvious to one of ordinary skill in the art at the

time of the invention was made to modify the data rate algorithm of Pinard to provide a point at which to stop resending and reduce the data rate as taught by Ryan. One skilled in the art would have been motivated to make the combination to improve the throughput rate (Ryan, col. 10, lines 53-55).

5. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinard in view of Pub. No. US 2006/0092888 A1 ("Jeong").

Regarding claims 4 and 13,

Pinard does not disclose determining if the percent of time the first channel is busy is above a threshold.

Jeong shows in fig. 6, determining if the medium is ever busy (para. 46).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the data rate algorithm of Pinard to be able to determine a busy channel as taught by Jeong. One skilled in the art would have been motivated to make the combination to improve the efficiency of the method and conserve resources.

6. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinard in view of Pub. No. US 2005/0073979 A1 ("Barber").

Regarding claims 5 and 14,

Pinard does not disclose determining if the number of active stations using the first channel is above a threshold.

Barber discloses that a radio mapping can further be used to promote load balancing between access points by causing an overloaded access point to disassociate one or more associated users, provided that such users can be "seen" or identified and therefore picked up by another nearby access point. The CCC can determine from the radio map that a given user can be seen by more than one access point either by noting that more than one access point is picking up transmissions from that user and can decode frames accurately. Alternatively, but probably not as reliably, the CCC can determine that the user can get service from another access point by just estimating coverage from the calculated physical positions of each radio and stats about nearby interference (para. 86).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the data rate algorithm of Pinard to be able to determine an overloaded access point as taught by Barber. One skilled in the art would have been motivated to make the combination to promote load balancing (Barber, para. 86).

Response to Arguments

7. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Sol whose telephone number is (571)272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2419

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. S./
Examiner, Art Unit 2419

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2419
12/22/08